

Lee

1645

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,952A

DATE: 01/28/2000
TIME: 11:59:04

Input Set: I210952A.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

PS

ENTERED

1 <110> APPLICANT: Fainzilber, Michael M.
2 Kits, Karel S.
3 Burlingame, Alma L.
4 Olivera, Baldomero M.
5 Walker, Craig
6 Watkins, Maren
7 Shetty, Reshma
8 Cruz, Lourdes J.
9 Imperial, Julita
10 Colledge, Clark
11 University of Utah Research Foundation
12 Vrije Universiteit
13 Regents of the University of California
14 <120> TITLE OF INVENTION: Gamma-Conopeptides
15 <130> FILE REFERENCE: Gamma-Conopeptides
16 <140> CURRENT APPLICATION NUMBER: US/09/210,952A
17 <141> CURRENT FILING DATE: 1998-12-15
18 <150> EARLIER APPLICATION NUMBER: US 60/069,706
19 <151> EARLIER FILING DATE: 1997-12-16
20 <160> NUMBER OF SEQ ID NOS: 47
21 <170> SOFTWARE: PatentIn Ver. 2.0
22 <210> SEQ ID NO 1
23 <211> LENGTH: 42
24 <212> TYPE: PRT
25 <213> ORGANISM: Artificial Sequence
26 <220> FEATURE:
27 <223> OTHER INFORMATION: Description of Artificial Sequence:generic formula
28 of gamma-conopeptides
29 <220> FEATURE:
30 <221> NAME/KEY: PEPTIDE
31 <222> LOCATION: (1)..(13)
32 <223> OTHER INFORMATION: Xaa at residues 1, 2, 3, 4, 5, and 6 may be
33 des-Xaa or any amino acid; Xaa at residues 8, 9,
34 10, 11 and 12 may be any amino acid; Xaa at
35 residue 13 may be des-Xaa or any amino acid.
36 <220> FEATURE:
37 <221> NAME/KEY: PEPTIDE
38 <222> LOCATION: (15)..(19)
39 <223> OTHER INFORMATION: Xaa at residues 15, 16, 17 and 18 may be any amino
40 acid; Xaa at residue 19 is Glu,
41 gamma-carboxyglutamate or Gln.
42 <220> FEATURE:
43 <221> NAME/KEY: PEPTIDE
44 <222> LOCATION: (22)..(28)

PAGE: 2

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,952A

DATE: 01/28/2000

TIME: 11:59:04

Input Set: I210952A.RAW

45 <223> OTHER INFORMATION: Xaa at residues 22, 23 and 24 may be any amino
46 acid; Xaa at residue 25 may be des-Xaa or any
47 amino acid; Xaa at residues 27, 28 and 29 may be
48 any amino acid.

49 <220> FEATURE:

50 <221> NAME/KEY: PEPTIDE

51 <222> LOCATION: (30)..(42)

52 <223> OTHER INFORMATION: Xaa at residues 30, 31 and 32 may be des-Xaa or
53 any amino acid; Xaa at residues 34 and 35 may be
54 any amino acid; Xaa at residues 36, 37, 38, 39,
55 40, 41 and 42 may be des-Xaa or any amino acid.

56 <400> SEQUENCE: 1

W--> 57 Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa
58 1 5 10 15
W--> 59 Xaa Xaa Xaa Cys Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa
60 20 25 30
W--> 61 Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
62 35 40

63 <210> SEQ ID NO 2

64 <211> LENGTH: 42

65 <212> TYPE: PRT

66 <213> ORGANISM: Artificial Sequence

67 <220> FEATURE:

68 <223> OTHER INFORMATION: Description of Artificial Sequence:generic
69 sequence of gamma-conopeptides.

70 <220> FEATURE:

71 <221> NAME/KEY: PEPTIDE

72 <222> LOCATION: (1)..(13)

73 <223> OTHER INFORMATION: Xaa at residues 1, 2, 3, 4, 5 and 6 may be des-Xaa
74 or any amino acid; Xaa at residues 8, 9, 10, 11
75 and 12 may be any amino acid; Xaa at residue 13
76 may be des-Xaa or any amino acid.

77 <220> FEATURE:

78 <221> NAME/KEY: PEPTIDE

79 <222> LOCATION: (15)..(22)

80 <223> OTHER INFORMATION: Xaa at residues 15, 16, 17 and 18 may be any amino
81 acid; Xaa at residue 19 is Glu,
82 gamma-carboxyglutamate or Gln; Xaa at residue 22
83 is Ser or Thr.

84 <220> FEATURE:

85 <221> NAME/KEY: PEPTIDE

86 <222> LOCATION: (23)..(29)

87 <223> OTHER INFORMATION: Xaa at residues 23 and 24 may be any amino acid;
88 Xaa at residue 25 may be des-Xaa or any amino
89 acid; Xaa at residues 27, 28 and 29 may be any
90 amino acid.

91 <220> FEATURE:

92 <221> NAME/KEY: PEPTIDE

93 <222> LOCATION: (30)..(42)

94 <223> OTHER INFORMATION: Xaa at residues 30, 31 and 32 may be des-Xaa or

PAGE: 3

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,952A

DATE: 01/28/2000
TIME: 11:59:04

Input Set: I210952A.RAW

95 any amino acid; Xaa at residues 34 and 35 may be
96 any amino acid; Xaa at residues 36, 37, 38, 39,
97 40, 41 and 42 may be des-Xaa or any amino acid.
98 <400> SEQUENCE: 2
W--> 99 Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa
100 1 5 10 15
W--> 101 Xaa Xaa Xaa Cys Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa
102 20 25 30
W--> 103 Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
104 35 40
105 <210> SEQ ID NO 3
106 <211> LENGTH: 39
107 <212> TYPE: PRT
108 <213> ORGANISM: Artificial Sequence
109 <220> FEATURE:
110 <223> OTHER INFORMATION: Description of Artificial Sequence:generic formula
111 of gamma-conopeptides
112 <220> FEATURE:
113 <221> NAME/KEY: PEPTIDE
114 <222> LOCATION: (1)..(13)
115 <223> OTHER INFORMATION: Xaa at residue 1 is any amino acid; Xaa at
116 residues 2, 3, 4, 5 and 6 may be des-Xaa or any
117 amino acid; Xaa at residues 8, 9, 10, 11, 12 and
118 13 may be any amino acid.
119 <220> FEATURE:
120 <221> NAME/KEY: PEPTIDE
121 <222> LOCATION: (27)..(39)
122 <223> OTHER INFORMATION: Xaa at residues 27, 28, 29, 31, 32, 33, 34, 35, 36
123 and 37 may be any amino acid; Xaa at residues 38
124 and 39 may be des-Xaa or any amino acid.
125 <220> FEATURE:
126 <221> NAME/KEY: PEPTIDE
127 <222> LOCATION: (15)..(19)
128 <223> OTHER INFORMATION: Xaa at residues 15, 16, 17 and 18 may be any amino
129 acid; Xaa at residue 19 is Glu,
130 gamma-carboxyglutamate or Gln.
131 <400> SEQUENCE: 3
W--> 132 Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa
133 1 5 10 15
W--> 134 Xaa Xaa Xaa Cys Cys Ser Asn Ser Cys Asp Xaa Xaa Xaa Cys Xaa Xaa
135 20 25 30
W--> 136 Xaa Xaa Xaa Xaa Xaa Xaa
137 35
138 <210> SEQ ID NO 4
139 <211> LENGTH: 39
140 <212> TYPE: PRT
141 <213> ORGANISM: Artificial Sequence
142 <220> FEATURE:
143 <223> OTHER INFORMATION: Description of Artificial Sequence:generic
144 sequence of gamma-conopeptides.

PAGE: 4

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,952A

DATE: 01/28/2000
TIME: 11:59:04

Input Set: I210952A.RAW

145 <220> FEATURE:
146 <221> NAME/KEY: PEPTIDE
147 <222> LOCATION: (1)..(13)
148 <223> OTHER INFORMATION: Xaa at residue 1 is any amino acid; Xaa at
149 residues 2, 3, 4, 5 and 6 may be des-Xaa or any
150 amino acid; Xaa at residues 8, 9, 10, 11, 12 and
151 13 may be any amino acid.
152 <220> FEATURE:
153 <221> NAME/KEY: PEPTIDE
154 <222> LOCATION: (15)..(19)
155 <223> OTHER INFORMATION: Xaa at residue 15 is Ser or Thr; Xaa at residues
156 16, 17 and 18 may be any amino acid; Xaa at
157 residue 19 is Glu, gamma-carboxyglutamate or Gln.
158 <220> FEATURE:
159 <221> NAME/KEY: PEPTIDE
160 <222> LOCATION: (27)..(39)
161 <223> OTHER INFORMATION: Xaa at residues 27, 28, 29, 31, 32, 33, 34, 35, 36
162 and 37 may be any amino acid; Xaa at residues 38
163 and 39 may be des-Xaa or any amino acid.
164 <400> SEQUENCE: 4
W--> 165 Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa
166 1 5 10 15
W--> 167 Xaa Xaa Xaa Cys Cys Ser Asn Ser Cys Asp Xaa Xaa Xaa Cys Xaa Xaa
168 20 25 30
W--> 169 Xaa Xaa Xaa Xaa Xaa Xaa Xaa
170 35
171 <210> SEQ ID NO 5
172 <211> LENGTH: 34
173 <212> TYPE: PRT
174 <213> ORGANISM: Artificial Sequence
175 <220> FEATURE:
176 <223> OTHER INFORMATION: Description of Artificial Sequence: generic
177 sequence of gamma-conopeptides.
178 <220> FEATURE:
179 <221> NAME/KEY: PEPTIDE
180 <222> LOCATION: (1)..(6)
181 <223> OTHER INFORMATION: Xaa at residues 1 and 2 may be des-Xaa or a any
182 amino acid; Xaa at residue 3 is Asp, Glu or
183 gamma-carboxyglutamate; Xaa at residues 5 and 6
184 may be any amino acid.
185 <220> FEATURE:
186 <221> NAME/KEY: PEPTIDE
187 <222> LOCATION: (7)..(16)
188 <223> OTHER INFORMATION: Xaa at residue 7 is Trp or 6-bromo-Trp; Xaa at
189 residues 9, 10, 13 and 14 may be any amino acid;
190 Xaa at residue 16 is Glu, gamma-carboxyglutamate
191 or Gln.
192 <220> FEATURE:
193 <221> NAME/KEY: PEPTIDE
194 <222> LOCATION: (28)..(34)

PAGE: 5

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,952A

DATE: 01/28/2000
TIME: 11:59:04

Input Set: I210952A.RAW

195 <223> OTHER INFORMATION: Xaa at residues 28, 30, 31, 32, 33 and 34 may be
196 any amino acid.

197 <400> SEQUENCE: 5
W--> 198 Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Cys Thr Xaa Xaa Ser Xaa
199 1 5 10 15
W--> 200 Cys Cys Ser Asn Ser Cys Asp Trp Thr Tyr Cys Xaa Leu Xaa Xaa Xaa
201 20 25 30
W--> 202 Xaa Xaa

203 <210> SEQ ID NO 6
204 <211> LENGTH: 32
205 <212> TYPE: PRT
206 <213> ORGANISM: Conus pennaceus
207 <220> FEATURE:
208 <221> NAME/KEY: PEPTIDE
209 <222> LOCATION: (1)..(31)
210 <223> OTHER INFORMATION: Xaa at residue 5 is Trp or 6-bromo-Trp; Xaa at
211 residues 14 and 26 are Glu or
212 gamma-carboxyglutamate; Xaa at residue 31 is Pro
213 or hydroxy-Pro.

214 <400> SEQUENCE: 6
W--> 215 Asp Cys Thr Ser Xaa Phe Gly Arg Cys Thr Val Asn Ser Xaa Cys Cys
216 1 5 10 15
W--> 217 Ser Asn Ser Cys Asp Gln Thr Tyr Cys Xaa Leu Tyr Ala Phe Xaa Ser
218 20 25 30

219 <210> SEQ ID NO 7
220 <211> LENGTH: 34
221 <212> TYPE: PRT
222 <213> ORGANISM: Conus textile
223 <220> FEATURE:
224 <221> NAME/KEY: PEPTIDE
225 <222> LOCATION: (1)..(34)
226 <223> OTHER INFORMATION: Xaa at residues 1, 7 and 34 are Trp or
227 6-bromo-Trp; Xaa at residues 3 and 16 are Glu or
228 gamma-carboxyglutamate; Xaa at residues 31 and 32
229 are Pro or hydroxy-Pro.

230 <400> SEQUENCE: 7
W--> 231 Xaa Leu Xaa Cys Ser Val Xaa Phe Ser His Cys Thr Lys Asp Ser Xaa
232 1 5 10 15
W--> 233 Cys Cys Ser Asn Ser Cys Asp Gln Thr Tyr Cys Thr Leu Met Xaa Xaa
234 20 25 30
W--> 235 Asp Xaa

236 <210> SEQ ID NO 8
237 <211> LENGTH: 39
238 <212> TYPE: PRT
239 <213> ORGANISM: Conus textile
240 <220> FEATURE:
241 <221> NAME/KEY: PEPTIDE
242 <222> LOCATION: (1)..(39)
243 <223> OTHER INFORMATION: Xaa at residues 1, 2, 4, 10 and 39 are Trp or
6-bromo-Trp ; Xaa at residues 19 and 31 are Glu or

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220> to
<223> fields of each sequence which presents at least one n or Xaa.

Input Set: I210952A.RAW

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57	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa X
59	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Cys Cys Xaa Xaa Xaa Xaa Cys X
61	W "N" or "Xaa" used: Feature required	Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
99	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa X
101	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Cys Cys Xaa Xaa Xaa Xaa Cys X
103	W "N" or "Xaa" used: Feature required	Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
132	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa X
134	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Cys Cys Ser Asn Ser Cys Asp X
136	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Xaa
165	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa X
167	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Cys Cys Ser Asn Ser Cys Asp X
169	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Xaa Xaa Xaa Xaa
198	W "N" or "Xaa" used: Feature required	Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa C
200	W "N" or "Xaa" used: Feature required	Cys Cys Ser Asn Ser Cys Asp Trp Thr Tyr C
202	W "N" or "Xaa" used: Feature required	Xaa Xaa
215	W "N" or "Xaa" used: Feature required	Asp Cys Thr Ser Xaa Phe Gly Arg Cys Thr V
217	W "N" or "Xaa" used: Feature required	Ser Asn Ser Cys Asp Gln Thr Tyr Cys Xaa L
231	W "N" or "Xaa" used: Feature required	Xaa Leu Xaa Cys Ser Val Xaa Phe Ser His C
233	W "N" or "Xaa" used: Feature required	Cys Cys Ser Asn Ser Cys Asp Gln Thr Tyr C
235	W "N" or "Xaa" used: Feature required	Asp Xaa
248	W "N" or "Xaa" used: Feature required	Xaa Xaa Arg Xaa Gly Gly Cys Met Ala Xaa P
250	W "N" or "Xaa" used: Feature required	Asp Ser Xaa Cys Cys Ser Asn Ser Cys Asp V
252	W "N" or "Xaa" used: Feature required	Met Xaa Phe Xaa Xaa Asp Xaa
264	W "N" or "Xaa" used: Feature required	Cys Lys Thr Tyr Ser Lys Tyr Cys Xaa Ala A
266	W "N" or "Xaa" used: Feature required	Xaa Gln Cys Val Arg Ser Tyr Cys Thr Leu P
280	W "N" or "Xaa" used: Feature required	Asp Xaa Xaa Asp Asp Gly Cys Ser Val Xaa G
282	W "N" or "Xaa" used: Feature required	Ala Xaa Cys Cys Ser Gly Asp Cys His Xaa T
284	W "N" or "Xaa" used: Feature required	Xaa Val
297	W "N" or "Xaa" used: Feature required	Gly Met Xaa Gly Xaa Cys Lys Asp Gly Leu T
299	W "N" or "Xaa" used: Feature required	Ser Xaa Cys Cys Ser Xaa Asp Cys Xaa Gly S
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343	W "N" or "Xaa" used: Feature required	Cys Gly Gly Xaa Ser Thr Tyr Cys Xaa Val A
345	W "N" or "Xaa" used: Feature required	Xaa Ser Cys Val Arg Ser Tyr Cys Thr Leu P
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538	W "N" or "Xaa" used: Feature required	ctctgccggt tgacacntca tctactctct cagtctcc
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790	W "N" or "Xaa" used: Feature required	Leu Cys Xaa Asp Tyr Thr Xaa Xaa Cys Ser H
792	W "N" or "Xaa" used: Feature required	Ser Xaa Asn Cys Tyr Asn Gly His Cys Thr
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825	W "N" or "Xaa" used: Feature required	sartgytgyt cn
845	W "N" or "Xaa" used: Feature required	athytnytng tngcngcngt nytn
857	W "N" or "Xaa" used: Feature required	Asp Cys Thr Ser Trp Phe Gly Arg Cys Thr V
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897	W "N" or "Xaa" used: Feature required	Xaa Thr Val Asn Ser Xaa Xaa Xaa Ser Asn S
899	W "N" or "Xaa" used: Feature required	Xaa Xaa Leu Tyr Ala Phe Xaa Ser